NJ GIS Update

*A newsletter about NJDEP's Geographic Information System* *Issue #40 Winter 1999/2000*

# New Jersey Metadata Workshops

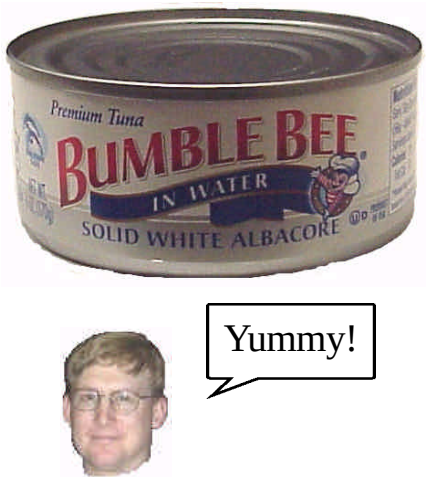
**NJDEP and Partners to Offer Free Metadata Training Workshops During April and May**

NJDEP and several partners are preparing to conduct regional metadata training workshops for the New Jersey GIS community. Staff at NJDEP and the Office of Information Technology (OIT), in coordination with Rutgers University, have been working to establish the New Jersey Geospatial Data Clearinghouse as a node on the National Spatial Data Infrastructure (NSDI). The Clearinghouse will soon be registered with the FGDC, making it ready to house metadata files. In an effort to develop the metadata needed to populate the Clearinghouse, NJDEP will be offering free metadata training workshops distributed throughout the state. In addition to training, NJDEP will also be distributing a free metadata creation tool called NJMetaLite. (See *Update*, Issue #39 for details.)

From the start, metadata training in New Jersey has been a cooperative effort. In 1999, NJDEP and thirty part-

*(Continued on page 5)*

## Examples of Metadata





*The metadata provided on a can label provides crucial information when deciding what to have for lunch.* *(see page 5)*

# Maps for Mayors: Land Use/Land Cover Data Already in Use

In an effort to demonstrate the utility of the 1995/97 land use/land cover data sets, BGIA is creating hard copy maps showing development trends for each of the municipalities in the state of New Jersey and providing each municipality's mayor with a map. It is hoped that these maps will spark an interest for further exploration of the newly available data sets.

The maps show areas that were developed as of 1986 and areas that show "change" or added development between 1986 and 1995/97. Through a series of simple queries, particular land use types such as commercial services, industrial uses, and residential development are extracted for each time period from the GIS data layer to produce the maps. The results allow conclusions to be made about development patterns between two separate time periods, often referred to as a "change detection analysis." The maps will also contain an estimate for the current

*(Continued on page 4)*

# Data News

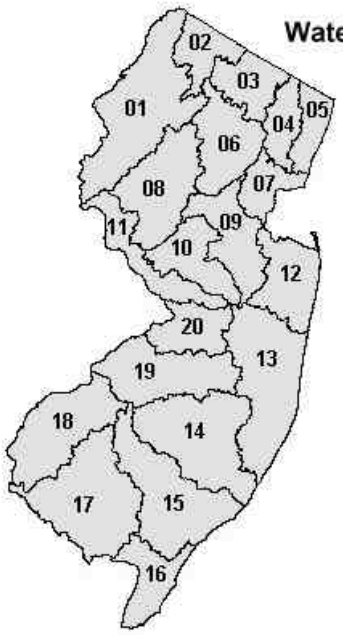
## 1995/97 LAND USE / LAND COVER UPDATE PROJECT

Since the last issue of the *Update*, NJDEP has received preliminary data for several more watershed management areas. Shape files for WMA 7, (Elizabeth, Rahway, Woodbridge), and WMA 9 (Lower Raritan, South River, Lawrence Brook) are now in-house and available for use. There are presently a total of nine WMA's for which updated land use layers are available: 3, 4, 5, 6, 7, 9, 12, 13, and 19. Next to be available for use are areas 8, 10 and 11.

Once checked, all layers are made available under the appropriate water region and water management area directory under /data/watershd. They have also been added to the theme selector extension in DEPView, so that the layers are easily available to everyone in NJDEP. We encourage you to take a look at them, and begin to use the data in your analyses.

In addition to being available through the theme selector for NJDEP use, these preliminary layers are also being posted on the GIS web site for downloading by the general user community. As with other data sets already available from the website, the public can download a WINZIP file containing the data files and associated metadata files for each of the above WMAs. Posting these preliminary data sets has been done in large part in response to the numerous requests we have already received for the data. We will continue to post the preliminary data as we get them, with the intent of replacing them with the final data once all of the watershed areas have been completed and edge-matched. So that users can verify whether they are working with a draft or final version, each data set has a STATUS and APPROVAL attribute field in the .dbf that identifies the version and review date of the data set. Final versions will be posted sometime in the fall of 2000.

*Submitted by John Tyrawski*




**Watershed Management Areas**

01 Upper Delaware
02 Wallkill, Pochuck, Papakating
03 Pompton, Pequannock, Wanaque, Ramapo
04 Lower Passaic, Saddle
05 Hackensack, Pascack
06 Upper Passaic, Whippany, Rockaway
07 Elizabeth, Rahway, Woodbridge
08 North and South Branch Raritan
09 Lower Raritan, South River, Lawrence Brook
10 Millstone River
11 Central Delaware Tributaries
12 Monmouth Watersheds
13 Barnegat Bay Watersheds
14 Mullica, Wading River Watersheds
15 Great Egg Harbor, Tuckahoe
16 Cape May
17 Maurice River and Cohansey Creek
18 Lower Delaware River Tributaries
19 Rancocas Creek
20 Crosswicks Creek

**Watershed Management Area Production Schedule, Delivery Status and Internet Posting Dates for the 1995/97 Land Use/Land Cover Update Project**

| Watershed Management Area | Status | Internet Posting Date |
|---|---|---|
| **WMA 6 Whippany** | Draft Final* | 1/19/00 |
| **WMA 12 Monmouth** | Draft Final* | 1/19/00 |
| **WMA 3,4,5 Pompton, Lower Passaic, Hackensack** | Draft Final* | 1/28/00 |
| **WMA 13 Barnegat** | Draft Final* | 2/4/00 |
| **WMA 7, 9 Elizabeth, Lower Raritan** | Draft Final* | 2/14/00 |
| **WMA 19 Rancocas** | Draft Final* | 3/2/00 |
| **WMA 8,10,11 N&S Branch Raritan, Millstone, Central Del.** | Received March 1 | Within 30 days of receipt |
| **WMA 1,2,20 Upper Del., Wallkill, Crosswicks** | Due June 1 | " |
| **WMA 14,15,16 Mullica, Great Egg, Cape May** | Due September 1 | " |
| **WMA 17,18 Maurice, Lower Del.** | Due October 2 | " |

**Note: FINAL versions of all draft finals will be posted as the edge matches between WMAs are completed. Project will be completed and all finals posted on or about November 15, 2000.*

# More Data News

## Coastal Centers

The BGIA has added a new data set to our geographic database: Coastal Centers. Created for the Office of Land Use Regulation, it is available on the "speeding bullet" theme selector ( ) in DEPView. This data set is a depiction of coastal center boundaries used for permitting by the Land Use Protection Program of NJDEP. The Coastal Centers are part of regulations adopted pursuant to the Coastal Areas Facility Review Act (CAFRA). This act required the development of rules that would be closely coordinated with the provisions of the State Development and Redevelopment Plan (State Plan). As a result, the Department developed the CAFRA Planning Map, which was modeled after the State Resource and Planning Map. The coastal centers are interim centers delineated by the Department for the purpose of coastal land use regulation. Impervious cover limits and vegetative cover requirements for sites in the CAFRA area are determined by a site's location in either a coastal center or coastal planning area. Coastal centers are classified into five categories, each with a defined maximum impervious surface percentage. Centers can be hamlets (50%), villages (60%), towns (70%), regional centers (80%), urban centers (90%). Planning areas, conversely, have maximum impervious surfaces at or below 30%.

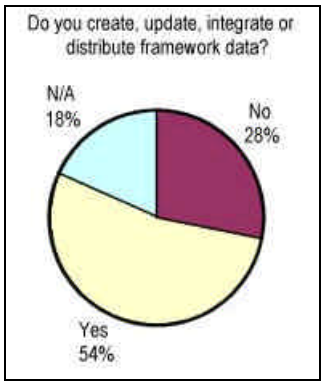
If you have any questions about these data, please contact Stacy Ho at: sho@dep.state.nj.us.

*Submitted by Karen Mitchell*

# New Jersey GIS Community Profile:
## Results of the 1997-1998 NSGIC/FGDC Survey

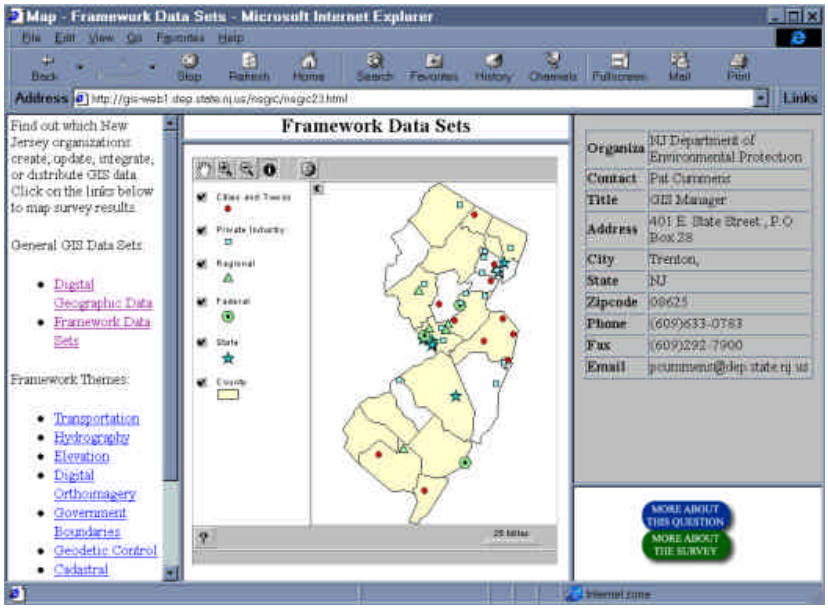
The National States Geographic Information Council (NSGIC) and the Federal Geographic Data Committee (FGDC) recently concluded a survey of over 5000 data users throughout the United States. This survey provides a snapshot of data being produced and used in state, regional, and local organizations that could contribute to the building of a framework of locally-produced, locally maintained data themes available. The New Jersey results have been compiled into an ArcView Interactive Map Server (IMS) application on a Windows NT server. The IMS application serves GIS data to a user's web browser. It includes information about the statewide GIS community and framework data: geodetic control, orthoimagery, elevation, transportation, hydrography, governmental units, and cadastral information.

The New Jersey GIS Community Profile is ENDEX's first fully functioning analysis template. Analysis templates encompass GIS mapping and analysis tools, meeting information retrieval needs. The Profile identifies companies, agencies, and organizations creating, updating, integrating, or distributing framework data. It also shows areas where data or data production is lacking. Users can select the map they wish to view, zoom in ( ) to an area of interest, and use the identify button ( ) to find out more about the organizations displayed on the map (see screenshot at bottom). Users can also click on the "MORE ABOUT THIS QUESTION" button to see the percentage of yes/no responses to that question (see chart below) or click the "MORE ABOUT THE SURVEY" button to download survey questions, answers, and charts or connect to the FGDC website about the national survey.




The New Jersey GIS Community Profile is available through the ENDEX prototype (http://www.state.nj.us/dep/gis/endex/prototype/prototype.htm) under Analysis Templates, or through the GIS website (http://www.state.nj.us/dep/gis) under Interactive Mapping. Presently, the analysis template only functions well using Internet Explorer 4.x or higher. Efforts are underway to make the application Netscape compatible. Apologies for this inconvenience.

*Submitted by Marla R. Chassels*



## Maps for Mayors

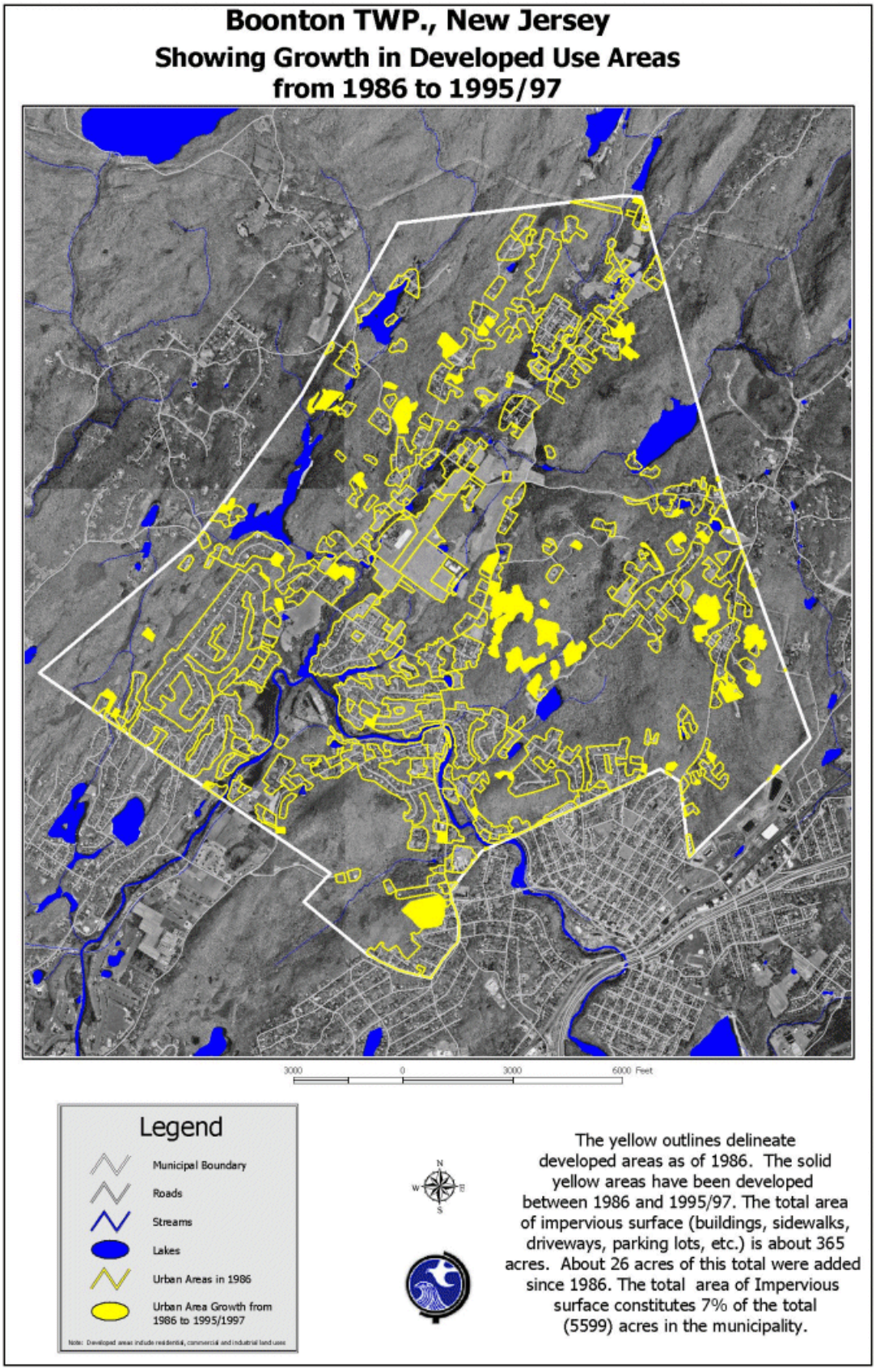
*(Continued from page 1)*

amount of impervious surface cover (sidewalks, driveways, parking lots etc.) as well as how much of it was added between 1986 and 1995/97.

The municipal maps are only one example of how this new data source may be utilized. While many municipalities have become aware of the benefits that GIS technology can provide for them, they have not been given the opportunity to see this first hand. This project is meant to "whet the whistle" for such analysis while encouraging recipients to go to our website: http://www.state.nj.us/dep/gis/ download the data, download a viewer (like ArcExplorer, ESRI's free GIS data explorer), and begin to explore the data and produce maps of their own. See the schedule on page two for data layers currently available for download.

We would like to encourage anyone using the data sets to pass along any comments that you have on the layers to gisnet@gis.dep.state.nj.us. Comments will be helpful in evaluating how useful and user-friendly the data layers are.

*Submitted by*
*Andy Hendrickson*



## Metadata Workshop

*(Continued from page 1)*

nering organizations received a "Don't Duck Metadata Grant" from the FGDC totaling $97,000. Grant funds were made available as an incentive for creating metadata. The metadata training curriculum is also being developed cooperatively among state, county and municipal representatives, academicians from NJ colleges and universities, as well as several individuals from private and non-profit organizations. The result of this effort has been the development of a one day metadata training workshop curriculum.

The ultimate goal of this series of workshops is to train as many NJ GIS users as possible in the skills needed to create FGDC compliant metadata, and to populate the NJ Geospatial Data Clearinghouse. But why should we care about metadata in the first place? The benefits for the users of geospatial data are numerous. Compliant metadata are specially formatted and contain necessary information that improve and enhance open information access and data sharing by utilizing the power of the internet. The Clearinghouse provides a one-stop shopping forum for users to post, view, and search compliant metadata as well as to acquire the data set. This will save time and money by providing a solution to obtain well-documented data in a timely and cost effective way and also by avoiding the expensive duplication of data.

The current plan is for the workshop to include five major parts:

**Part 1: Introduction to Metadata**
This will cover important background information about the FGDC and NSDI.

**Part 2: Clearinghouse Information**
Topics will include what a clearinghouse is, where and how to find metadata, and how to read metadata effectively.

**Part 3: The FGDC Content Standard for Digital Geospatial Metadata**
Students will begin to understand the Standard, its sections (compound/data elements, etc), templates, and a graphical representation of the elements.

**Part 4: Making Metadata with NJMetaLite**
The NJMetaLite software tool will be introduced. The functionality and capabilities of NJMetaLite will be covered as well as the metadata submittal process. The session will conclude with a practice session where students receive hands-on experience. Because this is hands-on, students are expected to do some homework and bring a metadata file with them to work on. This section will result in students completing a compliant metadata file if they come properly prepared.

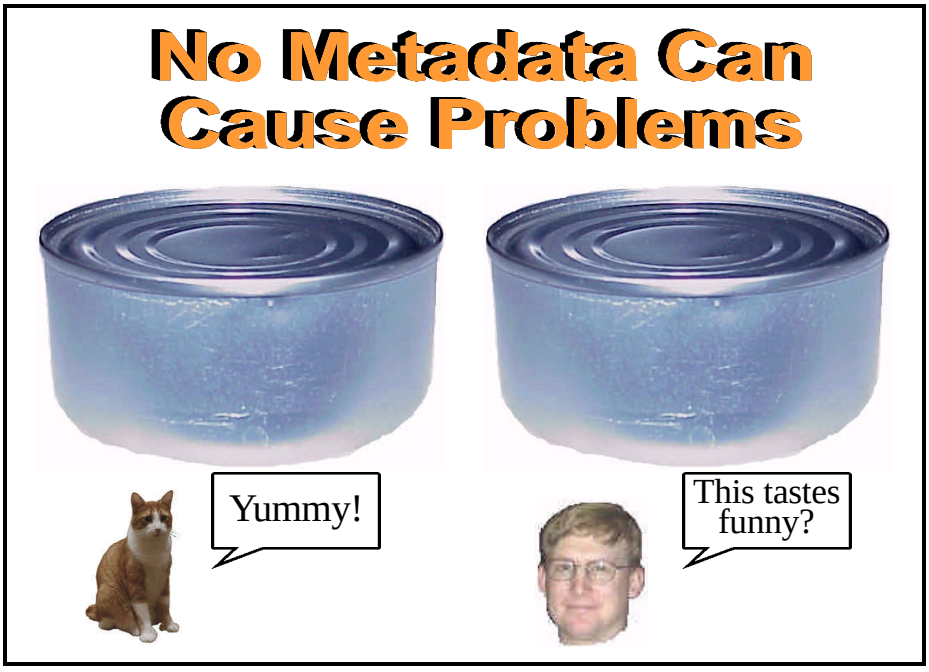
**Part 5: Other Tools for Making Metadata**
This portion deals with some of the many tools that exist for creating metadata. Though NJDEP is providing NJMetaLite as a metadata creation tool, there are other free tools as well as commercially available metadata tools. Several of the tools will be discussed, and resources will be identified for further comparison.

**Workshop Conclusion: Questions and Answers**
The workshop concludes with time for questions and discussion. Students will also receive metadata handouts and a CD-ROM containing the NJMetaLite application, background information, documents, and presentations.

Through this cooperative partnership, numerous metadata workshops will be offered during April and May. Workshops will be offered in the northern, central and southern areas of New Jersey. Once the curriculum is finalized, it will be made available to other organizations who are interested in training their own groups.

Information about the workshop schedule will be distributed to the NJ GIS community via mail, e-mail, and through the NJDEP GIS web site: http://www.state.nj.us/dep/gis.

*Submitted by Paul Caris*




*Without a can's metadata, or label, who knows what's inside? (see page 1)*

## CEHA/County GIS Users Group Meets During Snowstorm

On Wednesday January 26, 2000, a meeting of the CEHA/County GIS Users Group was held at the Middlesex County Fire Training Academy, in Sayreville, New Jersey. This group has not met since mid-1998, so this convening was long overdue. However, as fate would have it, the scheduled meeting date was the day after the major snowstorm that closed state offices. Turnout was low, but thirteen brave souls attended, representing eight counties. NJDEP was represented by Paul Caris and Mary Siller.

The CEHA/County GIS Users group began meeting in the early 1990s, and the group continued to meet through mid-1998. Though generally oriented to the representatives of the CEHA (County Environmental Health Act) program, other county users of GIS also participate. The main purpose of the group is to share information, data, and technical knowledge in support of CEHA and County GIS efforts. The group also promotes municipal GIS implementation and data sharing.

One of the major points of discussion was the reformulation of the group, including structure, scope, and meeting frequency. These issues were discussed at length, but will be revisited at the next meeting due to low turnout.

Mary Siller reported on two CEHA issues. The NJDEP is encouraging the investigation of significant tire dumps in the state. Because they trap stagnant water, tires are frequently breeding grounds for mosquitoes. This has recently become an issue due to the appearance of the West Nile virus, which is transmitted by mosquitoes. Mary also announced that the GIS training contract with The Richard Stockton College of New Jersey has not been renewed.

John Pavek of Burlington County GIS presented his plan for the formation of regional county GIS users groups in New Jersey, under the auspices of the Mid-Atlantic Chapter of URISA (Urban and Regional Information Systems Association). The MAC-URISA Tri-State County GIS Users Group, as it is to be known, includes adjoining counties in New Jersey, New York and Pennsylvania. If you have questions or would like to participate, please contact John (JPavek@co.burlington.nj.us). A point of discussion for a future CEHA meeting will be how to coordinate with this new group.

The meeting also included an ENDEX demonstration, with an emphasis on metadata creation efforts and the forthcoming release of NJMetaLite. CEHA/County GIS Users Group membership will be hearing more about metadata training workshops scheduled for April and May.

There will be another meeting of the CEHA group later this year, when the weather should be more hospitable. Also, remember that counties are invited to participate in the Annual NJDEP Map Contest, which is scheduled for Thursday, June 8 at 10:00 am.

*Submitted by Paul Caris*

## The BGIA Buzz

### Bill Guthe Leaves For School

After 16 years with NJDEP, Bill Guthe has left the BGIA to join the Multimedia Engineering Computation Atelier, School of Engineering and Applied Science, at Princeton University. As a GIS and Research Applications Programmer, Bill will be helping faculty and students use GIS and other technologies in teaching and research. His responsibilities will include processing remotely sensed data and manipulating other spatial data to create interactive Web-based educational applications. NJDEP's loss is Princeton University's gain. He will be greatly missed. Congratulations Bill!

### Andrew Hendrickson Joins BGIA

In December 1999, Andrew Hendrickson joined the BGIA and brought with him experience in spatial analysis and modeling through the integration of Remote Sensing and GIS techniques. Previously, Andy was with the Geographic Information Office of the New Jersey Pinelands Commission where he was involved in application development, parcel data acquisition, web-site design, and database maintenance. Andy also worked with the Rutgers University Center for Remote Sensing & Spatial Analysis (CRSSA) on the Barnegat Bay watershed, habitat loss and alteration project. Andy can be reached at (609) 292-0899 or via email at ahendric@gis.dep.state.nj.us. Welcome Andy!

### BGIA Welcomes Karen Mitchell

Karen Mitchell worked for the USDA-Natural Resources Conservation Service and with the Trust for Public Land, prior to joining BGIA in December 1999. She recently earned a Masters in Geography at Rutgers, focusing on GIS, planning and land use. At BGIA, Karen is taking over as database manager as well as working on applications development and in-house training. When not working in front of a computer, Karen can often be found horseback riding near her home in Hunterdon County. Karen can be reached at (609) 292-1705 or via email at kmitchel@gis.dep.state.nj.us. Welcome Karen!

### Mr Sid Now Working for BGIA

Those of you who have been frustrated by the long drawing times of digital imagery will be happy to know that Mr Sid has arrived to help us solve this problem. At NJDEP, Mr Sid will be focused on creating a multi-resolution seamless image database which will enhance distribution and management of these files. Mr Sid comes to us from LizardTech, Inc. in Seattle, Washington. Images created by Mr Sid can be used with ESRI products. Examples of Mr Sid's work with our data will be available shortly. Welcome Mr Sid! *(Check the Lizard Tech web site for information on MrSID image compression software: http://www.lizardtech.com)*

# Receive your NJ GIS Update via E-mail


The *NJ GIS Update* can be emailed as a PDF file to subscribers who prefer a digital copy to paper. Send your email address to dwest@gis.dep.state.nj.us, and please include whether you are currently receiving the *Update* or are a new subscriber. The *Update* will also be posted on the BGIA web page along with two years of back issues. NOTE: Adobe Acrobat Reader is required to view the PDF file and can be downloaded from http://www.adobe.com/prodindex/acrobat/readstep.html.

## New Jersey Office of GIS Is Established

In September of 1999, the New Jersey Office of GIS was established within the Office of Information and Technology. Through this office, the State of New Jersey has an unprecedented opportunity to organize the use of digital geographic information to implement priority initiatives. It will ensure a coordinated network of GIS capability across the state. The idea is to create a coordinated New Jersey network of shared data and tools supporting many of the daily decisions that cut across agencies at all levels of government. To succeed, there are several activities that should be managed outside of any line agency and coordinated by a statewide Office of GIS. These activities set forth the steps necessary to maximize current investments through cooperation, building for the future, and helping position NJ to be the "On-line State."

The NJ Office of GIS staff includes Hank Garie, Jackie Arnold, Bruce Harrison and Suzy Hess. Together they are working towards statewide GIS goals through the following activities:

- Establishing a Framework for Cooperation
- Creating a Mechanism to Track and Share Geographic Data
- Building GIS Capacity Within State Agencies
- Coordinating Training, Education and Outreach
- Encouraging Data (development, management and maintenance)
- Serving as the NJ Liaison with National GIS Organizations and Initiatives

Through the NJ Office of GIS, New Jersey organizations will work together to develop, maintain, and share statewide geographic data sets and the knowledge to improve efficiency in government; and will maximize the wise use of GIS technology as a decision support tool.

*Submitted by Jackie Arnold, OIT*

## 2000 NJDEP GIS User Meetings

The NJDEP GIS User Group meets every two months to discuss various topics of interest to users of the Department's Geographic Information System: database development, software distribution, applications, training, technical issues, user concerns, etc. All NJDEP GIS users and potential users are invited to attend.

All meetings are: 10:00 am to Noon
1st floor Public Hearing Room
401 E. State St.

| | | |
|---|---|---|
| Thursday, | April 13, | 2000 |
| Thursday, | June 8, | 2000 — Map Contest |
| Thursday, | August 10, | 2000 |
| Thursday, | October 12, | 2000 |
| Thursday, | December 14, | 2000 |


# New Jersey GIS Update

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# GIS Events

**96th AAG Annual Meeting**

*April 4-8, 2000 in Pittsburg, Pennsylvania*

A listing of sessions, business meetings, special events, field trips, and workshops are available on the Association of Amercan Geographers' website.

http://www.aag.org/AnnualMeetings/Intro.html

**13th Annual NJDEP GIS Mapping Contest**

*June 8, 2000 in Trenton, New Jersey*

To be held on Thursday, June 8th from 10:00am to noon in the Public Hearing Room (first floor of 401 E. State St.), the NJDEP GIS Mapping Contest is open to state employees, members of non-profit organizations, college students, and county government employees. More information will be posted on our website this spring.

http://www.state.nj.us/dep/gis

**ESRI User Conference 2000**

*June 26-30, 2000 in San Diego, California*

Twentieth Annual ESRI International User Conference will be held at the San Diego Convention Center and the San Diego Marriott Hotel and Marina. The conference is open to all authorized ESRI software users.

http://www.esri.com/events/uc/

**37th Annual URISA Conference**

*August 19-23, 2000 in Orlando, Florida*

URISA 2000 focuses on improving "urban and regional environments through the use of information technology." The conference, including sessions and technical exposition, will be held at the Omni Rosen Hotel.

http://www.urisa.org/00Conference.htm

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